Integrated databases will play an important role in national evaluations of animal health

The national initiative for comprehensive and integrated monitoring and surveillance will rely on data from multiple data sources such as the Generic Data Base (GDB).

The GDB, linked with other sources, will support basic surveillance functions such as data collection, evaluation, interpretation, and adjustment/refinement. Ultimately, decisions on types of surveillance, the number of samples to collect, where to do surveillance, and allocation of resources depend on the evaluation of these data.

One benefit of comprehensive and integrated monitoring and surveillance is the ability for Veterinary Services to demonstrate where a particular disease does or does not reside. This becomes important when trading partners ask the United States to document the amount of testing done for a particular species and disease.

In the past, state-level data were not easily accessible for such national summaries. Now, telecommunications and distributed databases can help address issues of national monitoring and surveillance for particular diseases and their eradication programs.

The accessibility of data is an important first step toward integrating databases with other government agencies such as USGS, NASS, and the Customs Service. For example, summary records of data on testing activity for pseudorabies virus (PRV) reside in a GDB central site. Data for the majority of states are available. Maps outlining PRV testing activity can be created at the county level, for on-farm, first point, or slaughter surveillance from 1996 to present.

Comparing the locations of tests done to the swine population provides an initial indication of the geographic coverage of the surveillance systems.

Figure 1 roughly depicts the hog population density (obtained from NASS 1997 Census data).

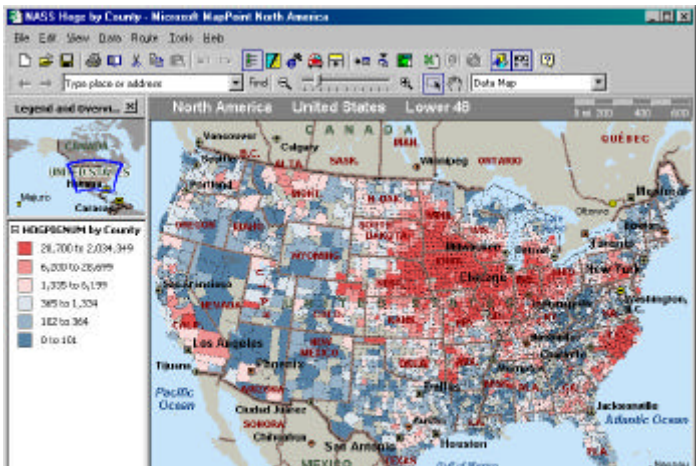

Figure 1.

The map in Figure 2 outlines, for states entering records into the GDB, all the tests that were done for PRV from 1996 to present.

In looking at both maps, testing appears to correspond to the population density represented in the NASS data.

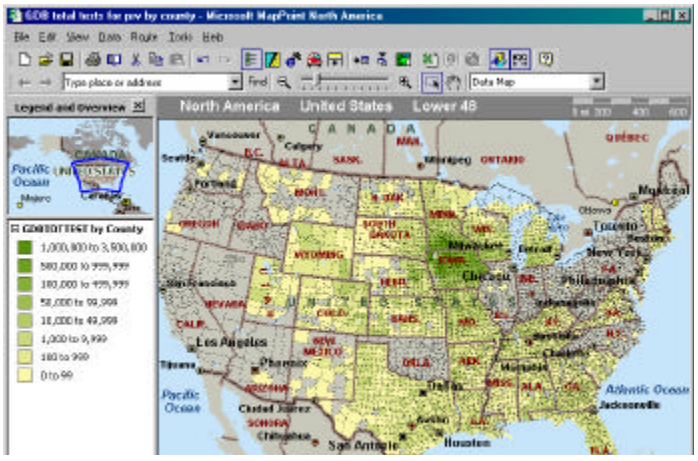

Figure 2.

The data from the GDB may also assist in determining resource needs. The map in Figure 3 depicts the farms that were tested because of a PRV-positive screening test of an animal at a slaughter plant since 1993. These data might assist decision makers in determining resource needs for tracebacks from slaughter testing programs.

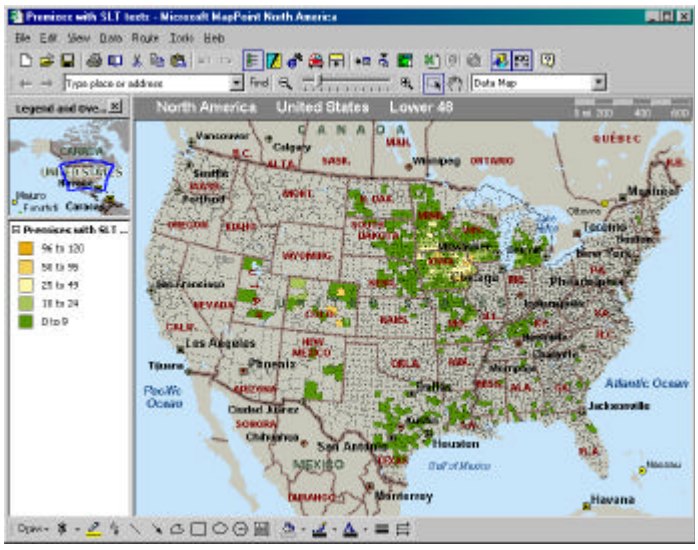

Figure 3.

Recognizing the importance of reliable and complete data, VS has committed resources for significant enhancements to the GDB during FY 2002. Summarization and evaluation of national data of the GDB has just begun, but the potential rewards are already evident.